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ABSTRACT

This publication is a collection of eight articles and ten software reviews written by the author for "Micro Missive" since 1984. "Micro Missive" is a quarterly newsletter that has regularly informed International Reading Association members of new developments in computer-based instruction and reading/language arts through articles, software reviews, and book reviews. In addition, a regular column in the newsletter, "Bits 'n' Bytes," has listed current news items of interest to computer-using teachers. (RS)

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Computers and Reading

1984-1989

Selections from Micro Missive,

The Newsletter of MicroSIG,

The Special Interest Group for Microcomputers in Reading of the International Reading Association

By Ernest Balajthy
State University of New York
at Genesco

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INTRODUCTION

Micro Missive is the quarterly newsletter of the International Reading Association's Special Interest Group for Microcomputers in Reading. Published since 1982, Micro Missive has regularly informed International Reading Association members of new developments in computer-based instruction. In general, its contents have included articles about computer-based instruction and reading/language arts, software reviews, and book reviews. In addition, a regular column, "Bits 'n' Bytes", has listed current news items of interest to computer-using teachers.

The present volume is a collection of articles and reviews I've written for Micro Missive over the past few years. All are still of current interest. The volume is divided into three sections. The first contains article and book reviews. The second section is a collection of software reviews on reading/language arts programs. The third section is entitled "Bits 'n' Bytes" and contains information about changes in the field of computing education and sources of information about it.

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PART ONE

ARTICLES AND BOOK REVIEWS

"FREE" SOFTWARE LIBRARY

by Ernest Balajthy

From Micro Missive, Volume 3.

When Apple Computer advertises that there are 10,000 programs available for their microcomputers, have you ever wondered where all those programs come from? The vast majority are in the "public domain." That is, they have been created by computer hobbyists and donated to computer clubs for free distribution. An informal network of computer clubs distributes the programs across the country and makes them available to computer users for "free"--usually about three or four dollars, just enough to cover handling costs and the cost of a diskette.

Most of these programs are of little use to reading teachers, though some have direct application for language arts instruction. Letter recognition activities, vocabulary drills, grammar practice exercises, speed reading drills, logic exercises--all are available in the public domain. Programs are rarely as comprehensive or as well-presented as in commercial software, but for $3.00 per ten programs on a disk, you can't go very far wrong.

The Microcomputer Committee of the New Jersey Reading Association has begun a collection of diskettes containing public domain programs of interest to reading and language arts teachers. The project is under the direction of Dr. Ernest Balajthy, co-chair of the committee. Three disks have been created so far, two with Reading/Language Arts programs and one

with Teacher Utilities (programs to help teachers--to create find-a-word puzzles with their own vocabulary words, for example). A total of ten disks are planned by the end of the 1984-1985 school year, all for the Apple II series. NJRA hopes to expand its offering to the IBM-PC within a short time, and to develop a disk of exercises for use with BANK STREET WRITER.

Anyone interested in more information on the disk library should contact: Dr. Ernest Balajthy, SUNY-Geneseo, Geneseo, NY 14454. All disks can be legally copied, and NJRA urges that purchasers duplicate copies for their colleagues.

Convention Notes on the International Reading Association Annual Convention--1985, New Orleans

Ernest Balajthy

(From Micro Missive, July, 1985)

After finishing writing textbooks, I suppose all authors undergo a series of discoveries about their topics that "should have been" included. IRA's New Orleans Annual Convention led to several such discoveries for me. Oh, well--maybe I can convince my publisher to put out a second edition.

* Though one might not realize it from my '84 Reading Teacher article on computer subskill drills, holistic software that integrates reading and writing in meaningful tasks is near and dear to my heart. I've always found it difficult, however, to convince teachers that these programs are usable. Demonstrating the awkward Story Maker (the Bolt, Beranek and Newman experimental program, not the new Scholastic program of that name) as an example of holistic software led more of my graduate students to convert to isolated computer subskill drills than to making the reading-writing connection. Fortunately, last year's appearance of Story Tree (Scholastic) showed that software designers could construct an easy-to-use program with which middle grade youngsters could work independently.

This year, Bank Street Story Book (Mindscape--1900 East Lake Avenue, Glenview, IL 60025, 312-480-7667) has won my heart. Children construct high-resolution screen pages with combined text and graphics. The pages are linked together automatically to form a story. Graphics are drawn using techniques developed in sophisticated graphics programs such as The Complete Graphics

System (Penguin) and Micro Illustrator (Koala), unlike the simplistic and awkward graphics in much other educational software. Text is simply typed on the screen page at any position desired.

In addition, BSSB has an on-disk tutorial written for middle grade students. Certainly Mindscape seems to know what teachers need.

*Grolier has developed software designed to lead students in a motivating series of discovery-oriented activities with reference books. Some programs are general, and other deal with specific references such as the Book of Knowledge.

*Why do publishers insist on putting out spelling software that forces students to choose from among misspelled distractors? Milliken is hardly unique in this, but I expressed my disappointment that one of the learning activities in their spelling series does this. The salesperson's reply was to the effect that if teachers did not want to use that activity, they could use the other two activities on the disk. I refrained from asking whether Milleken would discount their price by 1/3 in that case.

*Dan Daniel's organization of our MicroSIG meeting was a superb blend of the academic and the applied, the serious and the outrageous. Gerald Block, editor of Computers, Reading and Language Arts, chose the latter route--outrageous in the sense that he fulfilled a promise to outrage almost everyone in the audience with his controversial position statements on reading and computers.

His denunciation of artificial intelligence led to several immediate comments to me from those who had read a prepublication copy of my upcoming Journal of Reading article on AI: "Hey, Ernie, how do you feel about that?" I gained some satisfaction as Dr. Shelley Wepner of William Patterson College squirmed when Block criticized LOGO, and I smiled as I imagined the reaction of Karen Foley (former MicroSIG President, who was also in the audience) to Block's hostility toward teaching children to program.

How about some articles for Micro Missive defending your own points of view, folks?

*Congratulations to MicroSIG member Dr. David Reinking of Rutgers University (soon to move to the University of Georgia) for his placement as a finalist in IRA's Outstanding Dissertation competition. His topic was The Effects of Computer-Mediated Text on Measures of Reading Comprehension and Reading Behavior.

*Don't ignore specialty software houses for meeting the needs of special learners. Regents/ALA (Two Park Avenue, New York, NY 10016) materials are designed for ESL and EFL students. In addition, the company offers some word game activities for vocabulary development needs of all types of learners. Quizit, for example, is a vocabulary-in-context game with a teacher utility, based on the general idea of the TV show Name That Tune.

*The amount of empirical research being carried out on the use of computers for reading instruction is very disappointing. Dave Reinking's dissertation (mentioned above) and a study reported by Dr. Amber Prince of Berry College, our MicroSIG's new secretary, were the only two research reports I heard. Amber's

paper dealt with the effectiveness of video game drills for vocabulary instruction. I'm afraid that the story at National Reading Conference last December was the same--very little research on computer usage.

Could it be that doctoral students and research university professors simply do not know which research questions to ask about instructional computing? Perhaps our SIG members could address this issue. How about an article or symposium entitled, "Research Questions for Computer Instruction in Reading"? NRC or College Reading Association would both be appropriate conferences for such issues.

Ideas for IRA State Council Microcomputer Committees

Ernest Balajthy

(From Micro Missive, November, 1985)

As the outgoing chair of the Microcomputers and Reading Committee of the New Jersey Reading Association, I've spent some time reflecting on my suggestions for the new co-chairs. State microcomputer committees can potentially be a force for change in reading classrooms, but they face several debilitating problems. Some of these problems are characteristic of all state council committees. Others are specific to the general area of microcomputer technology.

1. Committees may be actually one-person shows, committees in name only.

2. Committees may be spread apart geographically, so that it is possible to hold only one or two meetings per year.

3. Depth of computer knowledge among committee members may be widely disparate.

4. Financial support may be lacking.

5. Committees may decide to carry out a project which duplicates work already carried out by another organization.

As the committee chairperson considers planning for the upcoming year's activities, these problems should be taken in account. My suggestions include the following:

1. Do not spend great amounts of time in duplicating work which has been done by other organizations. There are many checklists for software evaluation already in existence. There are many collections of software reviews. There are many lists of recommended software. Instead of redoing these jobs, let your

council members know where such resources can be found.

2. Publish an annual resource booklet which lists and describes local software previewing centers, local college courses in reading and microcomputers, names and addresses of committee members, state publications, recommended books and articles, and any other valuable items which council members should know about.

3. Maintain a data base of microcomputer-using council members.

4. The chairperson should not become bogged down in any one project. Instead, his/her time should be spent encouraging others to take on the desired projects and coordinating those efforts.

5. For specific projects, form action groups within the committee. All members of any one action group should live within reasonable distances of one another.

6. State and local councils face difficulty in meeting the needs of computer-using teachers, since the area is so specialized, and since computer knowledge varies so greatly. Consider forming a Special Interest Group for Microcomputers within your state council. The SIG might meet 2-3 times per year and charge dues to support its activities. Perhaps some of the larger local councils within the state might wish to start SIGs of their own.

7. Because of the specialized needs of microcomputer-using reading teachers, the state council might consider sponsoring mini-conferences for experienced computer users, perhaps in

conjunction with local colleges. This would be especially crucial in the next few years as more and more microcomputers are placed in the schools.

8. Publish a regular column on microcomputers and reading in the state newsletter to keep members up-to-date on developments.

9. Appoint members of your committee to keep up-to-date on activities of related organizations, such as the International Council for Computers in Education, IRA's MicroSIG, National Council of Teachers of English, local computer user groups, the state education department, and so forth.

10. Provide for distribution of public domain disks for your members. Master copies of public domain disks in reading may be obtained from organizations such as Computer-Using Educators, New Jersey Reading Association, and Virginia State Reading Association.

IMPRESSIONS: MICROCOMPUTERS IN READING AT THE 1986 INTERNATIONAL READING ASSOCIATION CONVENTION

Ernest Balajthy

SUNY-Geneseo

(From Micro Missive, June, 1986)

The 1986 IRA Convention in Philadelphia provided many new insights on how microcomputers continue to be integrated with the teaching of reading and writing. The following points are rather subjective--colored by my own perspectives and the sessions I attended.

* The "boom" period of astounding developments is over. There were few surprises at the convention. While overall growth continues, most of the new software and hardware is a refinement on existing materials rather than a startling innovation.

* Teacher-user sophistication has increased. A consistent complaint about the IRA sessions (except for the MicroSIG-sponsored sessions!) was that the speakers did not have enough depth. The presentations were simplistic and repetitive, aimed at teachers with little computer knowledge.

* Basal series are beginning to offer software which closely correlates with the texts. Scott-Foresman, for example, has incorporated instructions in their new teachers' manuals as to when to use the software and how to use it. This should help deal with one of the chief problems facing computer-using teachers: How to integrate computer instruction into the existing curriculum in meaningful ways. Scott-Foresman is also developing software to accompany their spelling text series.

* Voice synthesis is coming on strong, as indeed it should

have been several years ago. Many publishers now offer software which speaks. Schools must be careful, however, to choose hardware carefully. Follow the rule of thumb used for all computer hardware purchases: Buy a voice synthesizer which has sufficient software available. Don't depend on salespeople's promises of future developments. Also, as Peter Joyce noted in our SIG preconvention institute, recognize that voice synthesis hardware is developing so rapidly that schools should plan on replacing outdated hardware within a few years.

* Debates within the general field of reading are now beginning to strongly impact on microcomputer applications. This is a clear indication of the steadily increasing depth of our specialization area. Two topics immediately come to mind:

1. The debate between direct instruction in subskills versus holistic, computer-as-a-tool approaches was repeatedly raised during the MicroSIG preconvention institute, and the dialogue during panel discussions was excellent (and was repeatedly praised in the evaluation forms completed by those attending). Next year's SIG preconvention proposal will center on this debate, emphasizing practical applications on both sides of the issue.

2. The issue of reading diagnostic decision-making via computers was also hotly debated, especially following the talk on artificial intelligence expert systems at the MicroSIG meeting. Unfortunately, I had to cut the questioning short in order to allow time for our next speaker, but an on-going discussion on this issue is vital. This is particularly crucial

at the moment, as several diagnostic systems are presently under development. [P.S.--To anyone presently working on this topic: Please contact me with results of your development/research, as I am writing a chapter on the topic for my next book.]

Book Review: In Search of the Most Amazing Thing: Children, Education, and Computers. Tom Snyder and Jane Palmer. Reading, Mass.: Addison-Wesley, 1986. 154 pp.

Reviewed by Ernest Balajthy,
State University of New York at Geneseo

(From Micro Missive, March, 1987)

In Search of the Most Amazing Thing is a collection of the thoughts of Tom Snyder, a leading developer of game-like educational software for the development of thinking skills. As the preface notes, Snyder provided the content of the book. Jane Palmer served as an editor to very competently put Snyder's thoughts in writing. This book is characteristic of a rising tide of criticism directed against today's computer-based instruction.

I found it hard to understand why I could have such a negative reaction to a book that is insightful, well-written, and filled with fascinating bits of behind-the-scenes information about the contemporary world of educational computing. After some thought, I realized that my uneasiness with Snyder's work rests on the fact that it is a polemic--designed to support one person's somewhat idiosyncratic viewpoints. It is not the balanced consideration of the problems of educational computing that is needed by teachers, administrators, and the general public.

The book is easy to read and short (one evening will be enough to read it). Tom Snyder has received an unremittingly good press from such widely distributed magazines as Electronic Learning as an innovative leader in educational computing. As a

result, I fear that the viewpoints contained in his book will be received with uncritical approval. Perhaps my own attitude is simply that of a stodgy academic, but Snyder's ideas have been received as authoritative by many in the educational computing press and community, but I think that this book is evidence that Snyder is in over his head when he deals with educational issues.

Snyder's basic theme is that our search for the most amazing thing is a search for a well-educated child, and that human teachers are the only ones who can educate such children. His ideas reduce education to content-less problem solving and exploratory activities, a rehash of jargon coming out of the sixties. He does not recognize that, while education certainly involves exploration and discovery, there are effective structured learning experiences that contribute to education. Idiosyncratic, unorganized, "do whatever you want" approaches to education put too much of a restriction on our definition of learning.

Snyder appears to have no knowledge of the usefulness of direct instruction and drill-and-practice, nor does he appreciate the usefulness of carefully structured learning experiences. He argues that "current cognitive research indicates...learning is highly intuitive," but he concludes that cognitive construction of meaning does not benefit from organized learning experiences, certainly an unwarranted conclusion.

Snyder has no appreciation for teamwork among curriculum designers, nor for careful planning in curriculum. Instead, he argues that design of instruction is like art--it can't be done by committee. As a result, he is highly critical of the new

"wrap-around" software appearing to accompany basal reading series and other textbooks. Imaginative software must be designed by individual artists who are free to express themselves, not by curriculum designers. With a flourish, Snyder discards decades of proven, successful mass educational materials, such as basal reading systems, in favor of the game-like exploratory software designed by his own company. He seems to be ignorant of the fact that a tremendous body of research literature exists on how to teach reading, as well as other skills and content areas. He does not even seem to be aware of the fact that, in our curriculum design, we can look back on twenty or more years of experience with computer-based instruction for guidance.

He does not recognize that human teachers use tools to teach--our mere presence doesn't miraculously do the job--nor that the computer can serve as such a tool. He is very quick to write off those teachers who have seized on the microcomputer's usefulness to education, dismissing their enthusiasm as a gimmick designed to please school administrators.

In addition to disagreeing with Snyder on the basis of his educational theories as they pertain to computer-based instruction, I also disagree with him on some important details. For example, he is far too quick to write off the motivational value of computer-based instruction. There is no doubt that the "drill them till they drop" integrated learning systems create serious motivational problems, but in general, kids really enjoy CBI if it is handled correctly. Also, Snyder claims that

microcomputers were introduced as teacher replacements. I don't remember that. By the 1980's, past CBI research had clearly shown us that you can't replace a teacher with a microcomputer, and no one except perhaps Alfred Bork was claiming that you could!

There is also little in-depth discussion in the book. His discussion of word processing in the classroom is a good example. Snyder admits that word processing can be a valuable tool for revising. He goes on to warn that a word processor has no inherent ability to improve a poor composition and to say that revising is hindered by screen limits. None of these points is at all new to those familiar with research on word processing in the classroom, and, in fact, advocates have developed a wide range of suggestions for dealing with these and other problems. You will find none of those suggestions in Snyder's book.

In sum, I found Snyder's book to be a personal polemic that cuts to the heart of educational computing issues--but leaves the substance by the wayside. It is light reading, certainly not scholarly, but reveals a breadth of insight unusual among those associated with programming of courseware. Snyder has a clear understanding of the breadth of the problems that confront computers-in-education. His hold on the theory of education--the "why" of our esoteric doings in the classroom--is not very deep, however. He never seems to recognize that there are two sides to every one of the issues he discusses. It is important for those of us interested in computer-based education to become familiar with this book, because Snyder's well-known name is certain to attract a lot of attention.

Report on the 1987 MicroSIG Software Drop-In Booth at International Reading Association Annual Convention in Anaheim

By Ernest Balajthy, President, MicroSIG; Assistant Professor,

State University of New York at Geneseo

(Published in May, 1987, issue of Micro Missive

Origin of the Drop-In Center

At the 1986 Annual Meeting of the International Reading Association (IRA) Special Interest Group for Microcomputers in Reading (MicroSIG), members suggested that IRA sponsor a "hands-on" booth for evaluation of software and hardware. As president of MicroSIG, I had already contacted both Apple and IBM with the idea and I had found their response unenthusiastic.

In the winter of 1986-1987, Michael Gibbons and Carol DeBold of D.C. Heath contacted me, proposing the same idea for the 1987 IRA convention in Anaheim. I agreed, after consulting with my officers, and Gibbons and DeBold arranged for D.C. Heath to cover mailing and printing costs, as well as the cost of the booth. They also convinced Apple Computer Corporation to donate microcomputers for the booth and to provide for set-up and security.

Description of the Drop-In Center

Purpose

The vastly increasing amount of software available on the market has created a great deal of confusion on the part of teachers. While IRA commercial exhibitors can provide brief demonstrations of software in their own booths, teachers cannot perform an adequate evaluation of these materials unless they have the opportunity to sit down and try them out. The purpose of the MicroSIG Drop-In Booth was to provide this opportunity to teachers attending the IRA Convention.

Physical Description

The booth contained twelve tables. Eleven of the tables had two computers and one printer each. 21 computers were Apple II-series (IIe, IIc, and IIGS) and 10 printers were Image Writers. Two of the Image Writers were equipped with color ribbons. One computers was a Macintosh, equipped with a laser printer. One Apple IIe was equipped with an Echo Voice Synthesis device.

The eleventh table was used for handouts, publisher catalogs, and a sign-in sheet for visitors. MicroSIG will compile the list of visitors who did sign the sheet, send each a Micro Missive, and forward the list to vendors. But, only a small minority of visitors knew of the existence of the sign-in sheet. Greeters at the front of the booth were too busy explaining the booth's general purpose and operation, and they did not usually ask visitors to sign the list.

Hand outs included:

1) A listing of all software, with titles, grade level, skills, manufacturer and description. Manufacturer's addresses were also listed.

2) A list of journals and books with information on reading/language arts software.

3) An article on reading/language arts software by Henry Olds.

4) Information and membership applications for MicroSIG.

5) An evaluation form for visitors to record their reactions to various software, as well as to write down publisher information for later reference.

Software was displayed on the tables, grouped according to skills listed on the software handout. About 100 pieces of software, two copies each, were available.

Staffing

Between two and four MicroSIG members were on-hand at almost all times. An Apple and a D. C. Heath representative were also available to help, in non-sales roles. They played a crucial role in maintaining continuity as MicroSIG staff came and went, as well as when no MicroSIG members were on hand, during MicroSIG's Annual Meeting.

Public Domain Software

Public domain software was available for free (legal) copying by visitors. The software was drawn from collections created by the New Jersey and Virginia State Reading Associations.

Advertising

Advertising proved to be crucial in encouraging people to visit the booth. A significant percentage of visitors had heard of the booth and specifically set aside time to visit it. Many others first found the booth while wandering the exhibit floor, stopped briefly, and then would stop back for longer visits. From my observations, the following means of advertising were significant:

1) Quite a few people came in with the printed advertising cards D. C. Heath had placed in the convention registration packet.
2) Advertising the booth at the MicroSIG-sponsored computer preconvention institute.
3) Announcing the booth at the MicroSIG Annual Meeting.
4) Some publishers referred people to the booth for hands-on experiences with their software.

The advertisement in the convention program, provided by D. C. Heath, may or may not have been effective. I could find no concrete evidence on that score.

Security

No security problems were encountered. A hasty check during our clean-up revealed only one disk missing -- and that very likely was packed away in the wrong package in the rush to clear the booth.

Visitor Reaction

Visitor reaction was uniformly enthusiastic, and it was obvious that a lot of people learned much and enjoyed themselves at the booth, as well. Several visitors commented that the booth was the most valuable part of their convention experience. Many visitors spent several hours in the booth, though the average time spent was probably about one hour.

Relatively few computer neophytes appeared (perhaps 10-20% of the visitors). Most visitors were teachers or supervisors/administrators who were looking for new and effective software on which to spend their budget money. Most knew how to use computers and were (somewhat) experienced in software evaluation.

Visitors seemed attracted to nicely packaged software, rather than to loose disks. The more complex items (such as word processors) received more attention if they included on-disk tutorials. While we had quite a bit of software for elementary and secondary school, a number of visitors asked for more materials for college basic skills students.

Suggestions for Next Year

1) Maintain minimum of about 14 Apple II-series computers.
2) Increase number of alternate models of computers, if manufacturers wish to provide them. This will require the following:
   a) Actively seeking out of software vendors who publish material for those alternate models,
   b) Apple's provision of a staff person full-time during exhibit hours was invaluable and should be required of each computer hardware manufacturer who wishes to participate. These staff are in strictly non-sales status. All sales-oriented questions were directed to the exhibit booths elsewhere on the exhibit floor or to software catalogs.
3) Maintain involvement of MicroSIG members to provide guidance to booth visitors. This help is essential.
4) Increase number of software vendors contacted for donations.
5) Three chairs per table (i.e., three chairs for every two computers) should be provided.
6) Signs on the booth that more explicitly describe its function.
7) Place an advertisement in the preliminary program.
8) Advertisements to be distributed at computer-oriented preconvention institutes and at computer-

oriented convention sessions.

9) Due to the increase in use of voice synthesis, two or three computers should be equipped with Echo Voice Synthesizing devices.

Special Thanks

MicroSIG offers its special thanks to Michael Gibbons and Carol DeBold of D. C. Heath, who made the basic arrangements for the Drop-In Booth and who helped staff it during the convention, and to Tina Ruppelt of Apple Computer, who helped provide the equipment.

Facing the 1990's: MicroSIG President's Address

Ernest Balajthy, State University of New York at Geneseo

Presented at the Annual MicroSIG Meeting, May, 1988

(From Micro Missive, June, 1988)

One result coming out of the 1988 MicroSIG Preconvention Institute was the realization that the year had brought forth almost no truly innovative software. There is a malaise in computer-based education. In past years, a key question was, "What is the best new hardware and software?"--a "techie" question. This year, we are asking--in a more educational and sophisticated, and perhaps more critical, way--"How can we use the software we have?"

Another question raised several times at the Precon was, "What is our future, as advocates of computer-based instruction in reading and language arts?" The question was often raised in a spirit of discouragement. Funding for CBI is, at best, maintaining. For the foreseeable future, we will have to make do with the computers we have now. The reading field shows evidence of a turn to other concerns, such as Whole Language--I prefer the term "integrated language arts" in order to be clear that I want to avoid the anti-intellectual, faddish extremes of past holistic movements--and the issues involved in "professionalizing teaching." In essence, the field seems to be turning its attention to human--not technological--aspects of teaching.

Pehaps the issue can best be summed up in a question I've addressed to several of you in the past few days: "If you had a choice between having your teachers trained for 50 inservice hours in computer-based instruction, or for 50 hours in

integrated language arts (such as writing process, shared books, individualized reading, and language experience), what would you choose?"

The choice is obvious.

Therefore, we need to look seriously at our purpose, as advocates of computer-based instruction. Our allegiance must first be to education, not to technology.

Perhaps as we look for direction and purpose, we can now begin to see how educators <u>are</u> using computers.

1) As supplemental drill and practice, often using the abominable large-scale networking systems in urban areas. These are dull and tedious--not real reading--and as Michael Kamil pointed out in the Precon, there are no measurable benefits to such applications.

2) As a time filler--or worse, as a reward for good behavior. This application should be rejected out of hand.

And, for all too few teachers, 3) As a classroom tool to supplement integrated language arts. This is where the future lies.

I think we, as representatives of the reading field in computer-based education, have floundered around enough. We are, at best, using computers as replacements for drill books--and ineffectively at that, or we are inventing extraneous uses for computers. The IRA Computer Technology Committee, in its guidelines, offers vague advice that gives few concrete guidelines.

I would suggest that MicroSIG, over the next year, recognize

the obvious:

1. Let us discard our attachment to drill and practice programs--except for research purposes--and condemn their use in classrooms.

2. Let us actively recommend that schools remove computers from placements where they are being used as time-fillers and drillers, and implement their use as:

a. Teacher tools

b. Word processing and other computer-based tools that support language arts activities that integrate reading, writing, listening, speaking, and content area learning.

3. Let us encourage ways to support home-based computers (that outnumber school computer 8 to 1) as educational tools. This includes, in the interest of equity, government support for provision of computers and software to lower income homes.

AppleWorks in the Classroom: Tools for Use

Ernest Balajthy, Ed.D.

SUNY-Geneseo

(From Micro Missive, June, 1988)

With so many teachers using AppleWorks as a classroom word processor, we need to keep current with resources for use with this easy-to-use word processor.

AppleWorks in Your Classroom: A Student Introduction is designed for secondary students. Workbook activities, in conjunction with disk files provided in the package, lead students through exercises in revising using the work processor, arrangement of information using the database, and calculations using the spreadsheet. The material is available from J. Weston Walch, Publisher, 321 Valley Street, PO Box 658, Portland, ME 04104. Ten copies with disks cost $99.95.

The Works Newsletter deals specifically with AppleWorks in the classroom. It is published 9 times a year for $19.95. The Works also publishes a report entitled "Teachers' Best AppleWorks Tips. Contact David Chesebrough, Editor, PO Box 72, Dept IC, Leetsdale, PA 15056.

If Appleworks were my primary word processor, I would be hurrying out to purchase Beagle Brothers' new TimeOut series of programs, designed for use with AppleWorks. The Computing Teacher (March, 1988, pp. 49-52) recently ran an extensive review.

The great advantage of the programs is that they are accessible from within AppleWorks. For example, to access the

80,000-word spelling checker (TimeOut QuickSpell, $69.95), all the user need to is type Open-Apple Escape. In other spelling checkers, such as Sensible Speller, users must leave AppleWorks, boot the checker, run the spelling check, then reboot AppleWorks to continue work.

The TimeOut series includes a program to draw graphs based on AppleWorks spreadsheet files (TimeOut Graph, $89.95), a collection of Macintosh-like fonts for use with AppleWorks word processor files (TimeOut SuperFonts, $69.95), and a program to print database files sideways (TimeOut SideSpread, $49.95). The programs are available from Beagle Brothers, 3990 Old Town Avenue, Suite 102C, San Diego, CA 92110.

PART TWO

SOFTWARE REVIEWS

Software Review

USING THE COMPUTER TO INTEGRATE
READING AND WRITING

SOFTWARE REFERENCE:
Story Tree, published by Scholastic, 1984

Reviewed by Ernest Balajthy

(From Micro Missive, July, 1985)

Using computers to teach reading will not change the basic way children find success in learning to read. The most important principle of learning to read is actually very simple. It does not require teachers with years of experience. It does not require reading specialists for tutorial instruction. It does not require expensive sets of instructional books.

The basic principle of learning to read can be summed up like this:

Spend a lot of time reading.

It's as simple as that. Of course, well-trained and dedicated teachers are vitally important. Excellence in reading materials is motivational and a key factor. The most important thing you can do for your children in furthering their reading ability, however, is encouraging them to spend time reading.

You might be tempted to pass this off as obvious. Of course, you say, that's true, but let's get on to the really important things about teaching my child to read.

This is the really important thing. As a result, anything you can do on the computer that encourages the child to spend time reading will be important. Children today read very little. Adolescents read even less. Largely as a result, test scores

across the country have been falling. If all teachers motivated their children to read just a half hour a day in their spare time, reading ability test scores would skyrocket.

One more general principle of reading instruction is important to mention at this point. Reading ability is related to the child's general ability in dealing with language. Children who write well tend to read well, and vice versa. As much as possible, reading activities should include some writing.

How can these two key principles be put together as your child works on the computer? Teachers can pay special attention to software that meets the demands of both. Choose programs that involve interesting reading-related activities. Choose programs that have the child both read and write.

One exciting new program that capitalizes on both principles is called Story Tree. Story Tree is based on the choose-your-ending type of story that has been popular with children for the past several years. In a choose-your-ending story, the child reads a page, then is presented with a variety of options. For example, in a story about pirates, the page might end with the following:

> Suddenly, a voice cried out, "Ship ahoy! She's flying the skull-and-crossbones!"

The reader is then presented with several options. For each option choice, she is directed to turn to a different page that will describe the outcome of her choice.

> What should the captain do next?
>
> 1. Raise more sail and try to run away. (Turn to page 50.)

2. Turn about and arm the cannons. (Turn to page 51.)

3. Raise the white flag to surrender. (Turn to page 52.)

From these pages, different options are again presented. Children usually look through each of the options as they read the book, exploring the variety of possible outcomes. Quite a few choose-your-ending books are available in bookstores. If your child is not familiar with the style of such books, it would be helpful to buy some for him before using Story Tree. Buying a number of such books for your classroom lending library would be an important elaborative activity for following up on using Story Tree.

Story Tree allows youngsters to create their own choose-your-ending stories with the help of the computer. The package comes with several sample stories included. All stories created by the children can be stored on formatted disks and read as often as desired. Children love to read their own writing. Story disks created by children can be shared by all in the classroom, so that Story Tree activities combine both reading and writing. In addition, children should be encouraged to expand upon stories they've already created, adding new plot elements and characters in an on-going project.

Story Tree is a complex program. A child cannot be expected to be able to turn the computer on and figure out how to work it. Close attention to the printed directions is required. Ten or eleven-year-olds will need an adult to teach them how to use the program. Plan on spending an hour or two working with the

children before they are able to work on their own. Younger children will need a constant adult presence in order to use the program. The best idea with very young children is to have them dictate their stories as an adult types. Students in junior high school ought to be able to study the documentation and learn to use Story Tree independently.

While the commands are slightly complicated, the function of the program is fairly easy to describe. The top of the screen display is alloted to the story. The bottom of the screen page describes the options.

> As the morning wore on, the wind picked up, filling the sails and increasing our speed westward. The crew went about its daily routine, scrubbing decks and making the dozens of necessary small repairs to sails and woodwork. The captain strolled about the deck, inspecting the boat and its crew.
>
> Suddenly a voice cried out, "Ship ahoy! She's flying the skull-and-crossbones!"
>
> What should the captain do next?
>
> 1. Raise more sail and try to run away.
> 2. Turn about and arm the cannons.
> 3. Raise the white flag to surrender.

The story writer builds her story in screen pages. Each page contains some text. Most also contain options. The writer is able to direct the program from each option choice to specific screen pages. That is, when the reader chooses option one, the

program moves to a specific screen page that will describe what happens if the ship tries to sail away from the pirates. If the reader chooses option two, another screen page is displayed and the story moves in a different direction.

Story Tree lends itself to the kind of quality reading instruction that teachers should use in the classroom. It is particularly effective in teaching students story structure. It does require a very real time commitment on the part of the teacher, but the benefits in terms of making the important connection between reading and writing with your students can be great.

Construction of Meaning Through Prediction

Software Review: The Puzzler

By Ernest Balajthy

From Micro Missive, Vol. 4, No. 2 , April, 1986

The Puzzler, Sunburst Communications, Inc., Pleasantville, New York 10570.

The Puzzler is designed to deal with the important reading skill of predicting outcomes and confirming strategies. Goodman (1967) called reading a "psycholinguistic guessing game," an ongoing process of making inferences as to relationships and upcoming material. The Puzzler attempts to suggest to students the importance of carrying on this conversation with the text.

Which kinds of reading exercises most accurately suggest to the student just how reading and learning from text take place? Do multiple choice recall drills communicate the essence of the mature reading process to our students? Is reading comprehension, in other words, simply a rote process of memorizing facts? Or is reading comprehension far more complex, an interaction of many subprocesses, unified by the mind of the mature reader into an intricate pattern involving access to background knowledge, identification of relative importance of ideas within text, prediction of upcoming information, inferential relating of concepts within and without the text, and so forth?

Certainly the reading field advocates the latter definition of the reading comprehension process. Rumelhart (1977), for example, has proposed such an "interactive" theory of reading.

Goodman (1967) has suggested that reading, far from being an exact, rote process, is a kind of guessing game in which the reader is continually making inferences and predictions about the text in order to enhance understanding. Wittrock (1974) describes learning from text as "generative" in nature. That is, readers generate their own meaning structures from what they read, based upon such factors as their background knowledge, their purpose in reading, and the content and organization of the text.

If this is so, it behoves reading teachers to search out methods which encourage "active reading" (Singer, 1978) among their students. Readers must learn to actively seek out meaning, rather than passively sitting back as they read, hoping that something will sink in. If the construction of meaning is a function of what happens DURING reading, however, merely testing recall of information AFTER reading may be insufficient for real learning about the comprehension process to occur. In addition, since this construction of meaning is a truly personal process, one which will inevitably vary between individuals, whole-class instruction may not be the most effective method.

The microcomputer offers a unique opportunity to encourage students to view the reading comprehension process as an active search for meaning. In some ways, microcomputers are very limited. A computer cannot truly UNDERSTAND inputs. Its responses are highly limited, as a result (Balajthy, 1985). But computers offer the possibility of providing students with truly individualized instruction, within these constraints. The student can be one-on-one with the computer as it responds to

personal meaning-constructions based on reading the text.

Several microcomputer programs have become available which are designed to give students experiences in active involvement in reading and constructing meaning from text. The interactive nature of microcomputer instruction--the ability of the micro to respond to student inputs--makes this medium superior to traditional text books and drill books in this regard. While certainly a trained human tutor would provide more effective interaction, the microcomputer can serve a valuable, though limited, function when the software is appropriately designed.

The creators of The Puzzler suggest that their program fosters readers' ability to use three related strategies during reading: Predicting, confirming, and integrating. Based on their reading and on their prior background knowledge, mature readers predict words, sentences, and concepts, thereby making the reading process more fluent. These predictions are either confirmed or disconfirmed as reading proceeds. Once confirmed, they are integrated into the reader's knowledge store.

In order to foster these skills, The Puzzler presents a story, page by page. After each page, the student is asked an inference question, the answer to which has not been explicitly provided. She types in her response and it is recorded on the monitor screen for future reference. In fact, the on-disk instructions warn students that there are no single correct answers: "There are many good answers to every puzzle. You can have fun talking about your answers with your friends." As succeeding pages of the story appear, the student is given more

clues as to the answer. After reading each page, the student is allowed to make more guesses (up to six) at the correct answer to the inference question and to delete former guesses which have been disconfirmed by new information.

In the story "The Unusual Friend," one of five on the disk, the opening page offers a few clues to the inference question, "Who is Fred?"

> It's here! Karla rushed into the house waving a white envelope with a colorful Canadian stamp. This was the big moment!
>
> Tearing open the envelop her thoughts centered on Fred. Had anything happened to Fred since she left last August? For five summers Fred had been there when she arrived to visit her grandparents. It had been fun watching Fred grow but more exciting having such an unusual friend.

A guess that Fred is a squirrel might, for example, be disconfirmed later on in the story when it is found that Fred lives in a marshy area. By the end of the story, the reader has accumulated quite a few facts as to Fred's identity, but the program's authors avoid the temptation to provide any final answer. It is left up to the students to discuss their predictions with one another. While both students and teachers often find the lack of a final answer somewhat frustrating, the message is clearly conveyed that predicting is not an exact process. Different readers take different interpretations away

from the texts they read.

The Puzzler is accompanied by detailed documentation which includes suggestions and transparency masters for class discussion of the activities. Students are instructed to write down their guesses so that they can be remembered for class discussion. A printer option to print them out would probably be a bit more efficient.

Software Review: PlayWriter

Woodbury Software, 127 White Oak Lane CN 1001, Old Bridge, NJ 08857

Reviewed by Ernest Balajthy, SUNY-Geneseo

From Micro Missive, April, 1986

The PlayWriter series consists of four disks, purchased separately, entitled Adventures in Space, Tales of Me, Mystery, and Castles and Creatures. Each involves students in story creation. The series title is a bit misleading, as the final product is a story, not a play. The Mystery disk, for example, offers students a choice of four stories to create.

The story creation process involves a nigh amount of structure. Much of the work is done by choosing options from a multiple choice listing. For example, after originating a character's name (e.g., Sam Sneed) the student is offered the following screen page:

Your story opens with Sam Sneed
arriving at the detective
agency feeling:

1. as sharp as a tack.
2. bored and wishing a good
   case would come up.
3. exhausted from a wild night
   on the town.
4. other.

If the student chooses 1, 2, or 3, that phrase would simply be

added to the prior part of the story. Choosing Option 4 allows the student to write her own phrase to fit the end of the sentence.

Similar situations and options are presented, one following the other. At some points in the story, students are presented the task of writing some paragraphs to, for instance, describe one of the characters.

At the end of the session, the computer organizes all the inputs, both those chosen by multiple choice and those written by the student, into a cohesive story and allows the story to be printed out in hard copy.

Software Review: That's My Story

Learning Well, 200 South Service Road, Roslyn Heights, NY 11577

Reviewed by Ernest Balajthy, SUNY-Geneseo

From Micro Missive, April, 1986

That's My Story is structured much like the well-known Story Tree (Scholastic, Inc.). Readers move through a series of frames which present story parts. At the end of each frame, the reader is presented two choices as to how he would like the story to proceed. That's My Story is more structured than Story Tree in that the latter allows a great deal more flexibility. In Story Tree, not all frames end in choices, the computer can be ordered to make certain choices, and more than two choices can be made in any given frame. That's My Story does not offer these options.

With the decrease in flexibility in That's My Story comes increased ease of story creation, however. A computer user experienced in word processing can figure out almost all of the directions without referring to the user's manual. As a result, That's My Story is appropriate for younger children and will require much less teacher monitoring than Story Tree.

Stories may be stored on formatted disks. Another component of the program which will help younger children are the "story starters" included. These are short introductory passages which start the young writers off on a story. The students are provided the beginning of the story, then they must construct their own events for the rest of the story. The program comes with 40 story starters, and more can be added by the teacher or students if desired.

Software Review: Kermit's Electronic Story Maker

Simon and Schuster Computer Software Division, 1230 Avenue of the Americas, New York, NY 10020

Reviewed by Ernest Balajthy, SUNY-Geneseo

From Micro Missive, April, 1986

This program is designed to allow prereaders or beginning readers to have fun creating their own animated stories. The program is for the purpose of story creation and reading. It does not provide direct instruction. Rather it is designed to provide children with exposure to words and sentences, illustrating their meaning by using popular TV Muppet characters and easily recognizable situations and actions.

A series of blanks are provided at the top of the monitor screen. The child moves the cursor to the first blank using a joystick or the keyboard. The child can fill in the blank by pressing the RETURN key to see a variety of optional words or phrases. Each is illustrated and some have sound accompaniment. When the choice is made, the child goes on to the second blank, and so forth. All choices are grammatically correct, though many are semantically inconsistent ("delightfully absurd," in the advertising copy of the accompanying manual).

Children do not use the keyboard to type words. All appear automatically as the RETURN key is pressed. A variety of sentence forms are available, from simple three-word sentences (such as "THE MONSTER SWIMS IN SPACE") to rather complex constructions (such as "IN THE DESERT, FOZZIE WALKS. THE CLOCK RINGS.").

SOFTWARE REVIEW:

Ernest Balajthy

SUNY--Geneseo

(From Micro Missive, November, 1986)

Time Liner, Tom Snyder Productions

One of the most interesting and innovative programs newly available is a teacher-student learning tool for making customized time lines. Rather than simply teaching students how to read and create time lines, Tom Snyder Productions' Time Liner allows teachers and students to create their own.

Time Liner lends itself to a host of research projects. Students might, for example, research art history for major movements of the nineteenth and twentieth centuries. Each trend could then be entered into the Time Liner data base, which formats the time line appropriately and allows it to be printed. If another group had researched political events of the same period, Time Liner could merge the two time lines.

Technologically, Time Liner is sophisticated and easy to use. Time lines are automatically arranged, with information distributed according to date. Time lines are printed sideways and the printouts can be up to 99 pages long. There is a 37 character maximum length for every item. All items can be stored permanently on an auxiliary formated disk. While the program automatically formats the time lines, users can override the formating and order the printout to be compressed or spread out. The font is clearly readable. Its 3/4 inch size allows printouts to be read easily if posted on a bulletin board.

Software Review: Reading Style Inventory

Learning Research Associates, PO Box 39, Roslyn Heights, NY 11577

Reviewed by Ernest Balajthy, SUNY-Geneseo

(From Micro Missive, July 1986)

The Reading Style Inventory is a microcomputer software diagnostic device for dtermining students' "reading styles," and for matching students with appropriate instructional strategies based on those reading styles. The concepts of learning and reading styles have been advocated by Kenneth and Rita Dunn and their associate, Marie Carbo, who developed the RSI test. The RSI may be administered and graded at the microcomputer, or students may fill out answer sheets and Learning Research Associates will score the tests.

The usefulness of the RSI will depend largely on whether one accepts the premises involved with the concept of reading styles. While the developers make very positive claims for the usefulness of the reading style approach ("Learning Disabled Students Triple Former Progress"), the reliability of such diagnoses, which depend largely on differentiation of readers into auditory, visual, and kinesthetic categories, has been seriously called into question. Such classification has been consistently shown to be unreliable (Pikulski, 1985).

Perhaps the most useful approach to using the RSI is to view it as a detailed interest and attitude inventory. As such, it provides a wide variety of information, answering questions such as: How often do I complete my reading assignments? In what

kind of chair do I like to read? Do I like to listen to music while I read? Do I like to read at night?

On the other hand, a number of questions are of debatable value. "When I look at words, I often mix up letters like b and d." "I always remember the sounds letters make." Very few students will be able to accurately diagnose their own ability on such questions. Self-report data is notoriously unreliable.

A number of very serious objections can be raised against the RSI. The dubious claims of magnificent success possible with RSI materials is most objectionable. Few reading teachers will seriously accept the suggestion that the RSI curriculum will triple reading achievement. In addition, the advertising materials claim that the RSI test can tell teachers whether phonics or whole word method basals are best for a particular school system. Again, no research substantiation has been found for any such claims, no matter what the test. These advertisements are unprofessional. The claims will lead knowledgeable reading teachers to reject the test as bogus, when in reality the device can provide useful information.

A second objectionable aspect of the test involves its cost. The $129.00 RSI disk is designed to shut down after the test is administered to 150 students. There is no reason for such a design. What if, for example, vocabulary drill disks were published follwing this policy? Would anyone buy a disk which turns itself off after a few students use it? In addition, in order to obtain the vital group profiles, a Group Diskette must be purchased for an additional $129.00.

The diagnostic report is well-designed and highly informative. Diagnoses are reported on perceptual strengths and preferences, preferred reading environment, emotional profile, sociological preferences, and physical preferences. Each diagnosis is accompanied by a wide variety of suggested strategies for instruction.

In summary, the test provides some interesting and useful insights into the perceived desires and needs of learners. A detailed report can be printed out in hard copy on each learner. Group profiles, which allow the teacher to obtain the test results in more easily manageable form, are a real necessity for classroom administrations of the test.

Reference

Pikulski, John J. "Questions and Answers." The Reading Teacher, 39, no. 1 (October, 1985): 127-128.

Software Review: Computer Assisted Reading Assessment (CARA)

Southern Micro Systems, 919-226-7610

Reviewed by Ernest Balajthy, SUNY-Geneseo

From Micro Missive, July, 1987

CARA, developed by Michael McKenna at Wichita State University, is a program which analyzes a variety of general information about students' backgrounds, perceptual development, home environment, learning modalities, standardized reading test scores, and informal reading inventory (IRI) data and then generates a set of conclusions for diagnostic purposes. Teachers fill out test and observational data on a coding form to facilitate entry of the data into the computer. Actual entry of the data takes only a short time. The computer then analyzes the information in less than five minutes and generates (on the screen or a printout) a tailored set of conclusions.

A particular strength of the CARA program is its ability to carry out the detailed analysis necessary for interpretation of IRI results. An IRI consists of sequenced, graded reading passages, each of which is followed by comprehension questions. Some passages are read silently by the student, while for other passages, the student listens to the teacher read. A third type of passage, the oral reading selection, is read aloud by the student while the teacher records oral reading miscues.

CARA's documentation explains the various types of miscues and gives teachers instructions for classifying them into the categories of insertion, repetition, omission, reversal, teacher prompts, and substitutions. Once the IRI has been administered, the miscues categorized, and the resulting raw data entered on

the coding sheet, the information is input to CARA. It quickly analyzes the data and reports the student's independent, instructional, frustration and listening reading levels. The program uses the standards established by Emmett Betts in 1946.

CARA prints its diagnostic-oriented conclusions in hard copy or to the monitor. All information is saved to disk and can be recalled or edited easily for revised diagnoses at future dates.

CARA's documentation also states very clearly that it is not a replacement for the insight of an experienced reading clinician. It is especially useful for inexperienced teachers as a consultative aid and a helpful device for trained clinicians for preventing oversights.

Graduate students in my summer course on Microcomputers in Reading and Language Arts used CARA as a sample of computer-assisted decision making. Reading clinicians-in-training found CARA a valuable tool for simulation in analyzing case study results, as they compared their own analyses with CARA's conclusions. Other students in the course who had very little background in reading education found the program useful for providing a preliminary understanding of the reading diagnostic process. All students reported an increased appreciation for such programs as tools for helping the classroom teachers think about their students' reading problems in an analytical perspective. Overall, CARA was an impressive diagnostic-oriented program.

Software Review: The Writing Workshop

Milliken Publishing Company, (314) 991-4220

Reviewed by Lisa Rollins, Sue Lanphere, Sue Congdon, and Sherry Patrick, under the direction of Ernest Balajthy, State University of New York at Geneseo

(From Micro Missive, September, 1987)

Milliken Publishing Company has developed an extensive language arts program called The Writing Workshop. It includes prewriting activities, a word processor, and postwriting activities. Also included in the program are a spelling checker, mechanics checker, and a proofreader.

The purposes of the Milliken writing program are 1) to demonstrate to children that planning is effective in writing, 2) to model successful prewriting activities, and 3) to show children that no one model is the correct way to plan for efficient writing.

Milliken uses three prewriting disks to develop the skills required for planning. These include brainstorming, branching, and nutshelling. The brainstorming disk asks the student to think of a topic, list related ideas, and categorize them. The branching disk focuses on further development of the chosen topic by requiring students to supply details about the main idea. Nutshelling provides a guide for beginning a composition or story by offering questions appropriate to five different styles of writing: Explanatory essay, persuasive essay, descriptive essay, letter, and story.

This program also deals with students' reexamination of

their work to improve their first drafts. Mechanics and spelling checkers can be used to make the student aware of possible errors in spelling or grammar. The proofreader allows the student and teacher the opportunity to revise by adding comments without affecting original work. Then, preparation of a final copy is possible.

The Writing Workshop's process is supported by current research. According to Graves' and Murray's models of the writing process, it is necessary to include prewriting, drafting, revision, and publication stages in order for students to achieve full writing potential.

This program is educationally valuable for several reasons. The Writing Workshop follows highly structured steps needed for students to internalize the writing process. Although it is possible for this work to be completed through nonelectronic media, the motivation and the ease of writing and revision on the computer support its use in language instruction. The constant involvement of pupils on both reading and writing activities assures integration of these skills. Based on the integration of skills this program could be used not only as a supplement, but as a total writing program.

During our experiences with the program it upheld the criteria for user-friendliness. Designed for elementary through high school students, it would be appropriate for use with remedial and gifted students as well as in a regular classroom. Options for print size are given at the beginning of the program to account for individual differences. The student is also able

to contrl the rate of presentation, to return to previous pages, and to correct mistakes. If at any point students require help from the program, they are able to return to the main menu, press the help key, and receive further instructions. The ease with which this is accomplished eliminates any frustration that might occur.

To warrant the use of a computer program in a classroom, it should make maximum use of the computer's capabilities. The Writing Workshop provides for individual differences and abilities through the use of highly structured steps. It also provides suggestions to stimulate ideas when needed. For example, when brainstorming, a student is asked to give a topic. If the student is unable to supply one, several suggestions are offered. This is one example of computer branching in the program. A progress report is periodically given to keep students aware of their completed work.

The Writing Workshop is simple enough for a child with limited computer knowledge to use successfully. Clear directions were given throughout the program, and the writing steps follow a logical order. Due to these characteristics, it is unlikely that critical mistakes will occur. Therefore, the program is user-proof.

A relationship exists between the quality of a program and the amount of time and money spent on the development of it. It is obvious through the quality of documentation provided by Milliken that this relationship has been taken into consideration. Besides extensive pages of directions and explanations, student and teacher activities for pre- and

postwriting are given. These activities enable the program to be used not only as computer-based instruction, but for whole classroom use. In addition, a handbook is provided to guide students during the revision stage. It includes information on grammar, typing skills, and definitions.

Limitations do exist in The Writing Workshop. First, the cost of the program is $450.00, which seems expensive at first glance. However, a more detailed look at the program shows that many options are included that, if obtained separately, would exceed this price. Another limitation of this program may occur if a student chooses a topic that is unrelated to the help questions in the branching program. If this did occur, teacher intervention would be necessary.

The advantages of this program far outweigh the disadvantages. Knowing that this program was developed in conjunction with language arts educators, we, as classroom teachers, feel confident in recommending its use.

Software Review: MultiScribe

(Scholastic, Inc., PO Box 7502, 2931 E. McCarty St., Jefferson City, MO 65102)

Reviewed by Ernest Balajthy, SUNY-Geneseo

(From Micro Missive, November, 1987)

The long-awaited software designed specifically for the Apple IIGS is finally beginning to appear. A last minute revision in the design of the Apple IIGS last year delayed publication of this software. While the IIGS runs almost all software designed for earlier models in the Apple II series, purchasers were frustrated in having a potentially very powerful machine with no software that took advantage of that power.

MultiScribe is one of the first word processors designed for the IIGS. Frankly, I cannot recommend its purchase, as it has weaknesses that automatically eliminate it as a potential word processor.

First, the speed of the program is incredibly slow. The long loading time for the program takes some getting used to, but IIGS users will have to reconcile themselves to a powerful computer that uses old disk access technologies. The wait time necessary for the computer to load each font is even more disturbing, however, as the wait is necessary each time the font style or size is changed.

In addition, the program is so slow that even slow typing outpaces the appearance of letters on the screen. No user should have to put up with such a flaw. Another new IIGS word processing program, GraphicWriter (DataPak) also suffers from this problem, according to a Classroom Computer Learning review

by Henry Olds (September, 1987, pp. 20-ff).

Second, the quality of the fonts is significantly inferior to the fonts offered by the Macintosh. While several different fonts are included on the MultiScribe disk, only one is readable with ease. Since the variety of font styles is one of the main selling points of the new IIGS word processing software, MultiScribe's poor performance on this score makes it a poor choice as a program.

While there is a lot more I could say about MultiScribe, the flaws above make it pointless. Frankly, for serious word processing on the Apple IIGS, I am staying with AppleWorks at this point or use WordStar on my CP/M card. For fancy fonts, I'll continue borrowing a friend's Mac.

Scholastic offers a 30-day trial use of its version of MultiScribe. All you need do is enclose payment ($99.95). You can use the program for 30 days and return it for refund. Try it--you won't like it.

PART THREE

BIT 'N' BYTES:

NEWS COLUMN

Bits and Bytes

(From Micro Missive, July, 1985

* For those of you who are unaware, Conduit has stopped publishing its journal Pipeline due to insufficient financial support.

* The Michigan Reading Association has adopted guidelines and an evaluation checklist to assist teachers in selecting software. A copy of the pamphlet, "Guidelines for Evaluating Reading Software," may be obtained free by sending a self-addressed, stamped envelope to Michigan Reading Association, PO Box 7509, Grand Rapids, Michigan 49510.

* Electronic Learning (May/June, 1985) published some interesting facts and figures, based on information from EPIE's The Educational Software Selector:

--70% of all educational software runs on Apple II.

--Commodore 64 and IBM computers received more attention from publishers in 1984.

--PET, VIC-20, TRS-80, Atari, and TI-99/4A received less attention from publishers in 1984.

--25% (1575) of CAI programs in TESS are for math.

--12% (736) are for English/language arts.

--9.9% (608) are for reading.

BITS AND BYTES

Ernest Balajthy

(From Micro Missive, November, 1985)

* Weekly Reader Family Software, publishers of the Stickybear series, is no longer a division of Xerox. It has been acquired by Field Publications. The address remains the same: 245 Long Hill Rd., Middletown, CT 06457, 203-347-7251.

* New books on the scene:

Ewing, Jim (Ed.). Reading and the New Technologies. London: Heinemann Educational Books, 1985.

Chan, Julie M. T., & Marilyn Korostoff. Teachers' Guide to Designing Classroom Software. Beverly Hills, CA: SAGE Publications, 1984.

Schwartz, Helen J. Interactive Writing: Composing with a Word Processor. New York: Holt, Rinehart and Winston, 1985.

* Davidson Publishers has a new address: 3135 Kashiwa St., Torrance, CA 90505. 213-534-4070.

* Interesting quote: "The current business practice of the computer industry seems to have just one awe-inspiring motivation--GREED." Robert G. Stewart, in a column lamenting lack of micro standards in the industry. "microSTANDARDS." IEEE Micro, 5, no. 1 (February, 1985), p. 72.

* Interesting research study: Wagner, W. G., O'Toole, W. M., Kazelskis, R. (1985). Learning word processing skills with limited instruction: An exploratory study with college students. Educational Technology, 25 (2), 26-28.

Found that in instructing students to use a word processor,

demonstration was the most effective method. Lecturing was no better than simply giving students a manual to study.

* Classroom Computer Learning (October, 1985, 6, no. 2, p. 14) reports the newest tactic software publishers are using to frighten school systems away from copying software. A trade association has threatened to assist in prosecution of an Ohio school district for copyright infringement. By randomly singling out specific districts and threatening prosecution, the publishers apparently hope to keep pressure on teachers.

* Interesting new term: "Vaporware"--software which is advertised by publishers, but which may be years away from actual publication or may never be published at all. Milliken's postwriting program, promised as an adjunct to its word processor, is a good example.

* Milton Bradley's software is now published by Media Materials, 2936 Remington Ave., Baltimore, MD 21211.

* Sierra On-Line's StoryMaker program (not to be confused with similarly named programs by other publishers) is no longer in production.

* An excellent article listing many resources for use of microcomputers with special education and learning disabled students: "Learning Disabilities Guide" by Lesli Rotenberg. Teaching and Computers, 2, no. 8 (May/June, 1985), 39-45.

* An informative article on the software copyright laws, taking into account the controversy concerning "multiple loading"--booting from one disk into more than one computer--is entitled "Software Copyright: The Current State." It was published in the July/August/September, 1985, issue of SIG

Bulletin, 2, no. 1, pp. 13-16.

The article cites from several articles by LeRoy Finkel in CUE Newsletter and The Computing Teacher in which Finkel interprets the copyright laws as stating that multiple loading is illegal unless the software publisher explicitly gives permission for it. Are you ready to buy a different copy of Bank Street Writer (and every other piece of software you own) for each of your micros, folks?

* Classroom Computer Learning (November/December, 1985 issue) reports that 9 of the 10 best selling pieces of software are programs often used in language arts instruction. They are: 1) The Print Shop (Broderbund), 2) The Newsroom (Springboard), 3) Bank Street Writer (Scholastic), 4) MasterType (Scarborough), 5) The Print Shop Graphics Library (Broderbund), 7) Word Attack! (Davidson), 8) Crossword Magic (Mindscape), 9) Early Games (Springboard), and 10) Kidwriter (Spinnaker).

Bits 'n' Bytes

(From Micro Missive, March, 1987)

**The Spring/Summer, 1986, issue of The Reading Instruction Journal was edited by SIG member Shelley Wepner and is devoted to microcomputer topics. Articles by members include:

"Technology Development: It's Not the Hardware of the Software; It's How You Use It"--George Mason

"Six Advantages of Computer-Mediated Text for Reading and Writing Instruction"--David Reinking

"On-Line Communication: A Revolution in Reading"--Michael N. Milone

"So What Do They Write About in the Other 20 Per Cent?"--Larry Miller

"Teaching Students Revision Skills Using Microcomputers"--Ernest Balajthy, Robert McKeveny, and Lori Lacitignola

**Keystone State Reading Association has published The Reading Teacher's Guide to Software, a collection of software reviews edited by MicroSIG member Virginia B. Modla. This 166-page book contains dozens of software reviews, organized according to categories of readiness, word recognition, vocabulary, comprehension, word processing, writing, spelling, and study skills. Copies may be obtained for $7.00 from Virginia Modla, Cheltenham Twp. School District, Administration Bldg., Ashbourne & Washington Lane, Elkins Park, PA 19117.

**Significant quote: "Over the next 25 years, the computer will become the dominant delivery system in education. In most subject areas, more people of all ages will learn more things

Bits and Bytes

(From Micro Missive, June, 1986)

* First Byte plans to bring out versions of Speller Bee and Kid Writer for the Apple II series. The programs, both of which incorporate phonemic voice synthesis, are presently available only for the Macintosh. The new Apple II programs will use a special voice synthesis peripheral device to be manufactured by First Byte.

* Scott-Foresman and Mindscape are both owned by the same parent corporation. The computer-based learning division of SF publishes software to accompany their basal readers and other textbooks. Mindscape targets its software to a more general educational (and entertainment) market.

* Microcomputer Workshops, publishers of programs such as the grammar tutorial series English Achievement Series, will now have their software distributed by CBS Interactive Learning, One Fawcett Place, Greenwich, CT 06836 (203-622-2500).

from computers than from lectures, textbooks, or other modes. In educational institutions the next 25 years may be a time of great turmoil." Alfred Bork, 1985. Personal Computers for Education. New York: Harper & Row.

Bits 'n' Bytes

(From Micro Missive, May, 1987)

**10 Best Programs of the Year, Classroom Computer Learning, Feb., 1986:

Bank Street Musicwriter, Mindscape

Bank Street StoryBook, Mindscape

Cardiovascular Fitness Lab, HRM Software

Chipwits, Brainpower, Inc.

Geometric Supposer: Triangles, Sunburst

Magic Slate, Sunburst

Muppet Learning Keys, Sunburst

The Newsroom, Springboard

The Other Side, Tom Snyder Products

The Voyage of the Mimi, Holt, Rinehart & Winston

**The Educational Technology Center at Harvard Graduate School of Education publishes a regular newsletter, ETC Targets. A free subscription can be obtained from ETC, 337 Gutman Library, Cambridge, MA 02138. ETC carries on research and development projects in educational technology applications in science, mathematics, and videodiscs.

**The Eight Best Programs, School Tech News, 1985

Bank Street Writer, Scholastic

Rocky's Boots, Learning Company

Gertrude's Secrets, Learning Company

The Factory, Sunburst

Bumble Games, Learning Company

Gertrude's Puzzles, Learning Company

Bumble Plot, Learning Company

Delta Drawing, Spinnaker

**Word Munchers, the phonics video drill game that is based on PacMan, is MECC's best selling piece of software.

**The Best Programs in Language Arts, Minnesota Dept. of Education:

English, Parts of Speech, Vol. 1, MECC

Fundamental Spelling Words in Context, Random House

Sentence Structure, Jostens Learning Systems

Word Structure, Jostens Learning Systems

Bits and Bytes

(From Micro Missive, June, 1988)

Adult Literacy

Perhaps the foremost project involving adult literacy and computer technology is being carried out at Penn State's Adult Literacy Project. Proceedings of their recent conference are available for $10. The Project also publishes a newsletter, The Adult Literacy and Technology Newsletter. Subscription rates are $15 per year. Contact The Institute for the Study of Adult Literacy, Pennsylvania State University, 248 Calder Way, Room 307, University Park, PA 16801.

Software Awards

The Software Publishers Association made the following awards in 1987:

Platinum Award (250,000 copies sold)

- Bank Street Writer (Broderbund)
- Print Shop Graphics Library (Broderbund)
- WordPerfect (WordPerfect Corp.)
- Music Construction Set (Electronic Arts)
- Math Blaster (Davidson)

Gold Award (100,000 copies sold)

- Where in the World is Carmen Sandiego? (Broderbund)
- Rocky's Boots (Learning Co.)
- Reader Rabbit (Learning Co.)